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REVEALED COMPARATIVE ADVANTAGE OF INDIA AND CHINA

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ABSTRACT

This paper tries to examine the changing Comparative Advantage of India and China. The index of "Revealed Comparative Advantage" has been calculated for eleven import categories and four categories based on the level of technology for the period 1990-2011 using an index based on Balassa's Revealed Comparative Advantage Index.

Since India and China have abundance of Labor and less physical capital, India's and China's calculated Revealed Comparative Advantage (RCA) Index says that both the countries have comparative advantage in textiles and metal products compared to the world market. Both the countries are developing rapidly and physical capital is accumulating, so an increase in the RCA Index of advanced high technology and medium high technology products has been seen.

***KEYWORDS:** Index Says that Both the Countries have Comparative Advantage in Textiles and Metal Products Compared to the World Market*

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Original Article

INTRODUCTION

The trade pattern of the economy of the world is changing very frequently now-a-days. The world economy is becoming diversified. The advanced developed western countries are no longer the sole ruler of the world. The Asian economies are developing so rapidly especially. India and China which have attracted the concerns of the rest of the world, as India and China are the largest developing countries with large population and territory in Asia. These two developing countries are playing an important role in the field of international trade. These countries are not just similar in size, but also in factor endowments. Both the countries have comparative advantage in labor-intensive industry, which leads to a large amount of exportation of such kind of commercial products. But obviously, China and to India are not absolutely the same

I aim to find out the India's and China's characters of industry and the changes of the two countries international trade patterns since 1990. Using the OECD and STAN data, I calculated the Revealed Comparative Advantage for each country. By researching the data which is given by OECD, I find that both India and China have comparative advantage in textile, metal products and other manufacturing. Their Revealed Comparative Advantage (RCA) indices are all greater than unity and as time goes by, the RCA index of China's textile industry is getting smaller while for the metal product industry, the RCA index is rising. But manufacturing industry's RCA is fluctuant.

Objectives

In this paper, I attempt to analyze the following aspects:

- What are the comparative advantage for both India and China in the world market?

- What happen to both India's and China's international trade from the year 1990 to 2011?
- What happened to the different industrial sectors of both India and China?

This paper is organized as follows. Section 2nd is for brief literature review on the different indices of Revealed Comparative Advantage. Section 3rd is for Data and Methodology. Then, the next section i.e. section 4th is for Results. And finally the last section is the Conclusion.

LITERATURE REVIEW AND THE ORETICAL BACKGROUND

There is a lot of empirical measures and theoretical foundation of comparative advantage created by economists over time. The Ricardian Comparative Advantage model, in particular, has long been regarded as a very useful pedagogical tool which says that a country must produce and export those commodities in which it is relatively more productive and import those commodities in which it is relatively less productive. But, Ricardian Comparative Advantage model received less attention in empirical studies due to the absence of a clear theoretical micro foundations and theoretically consistent measure of comparative advantage. **Bela Balassa (1965)** tried to overcome this weakness by developing an index called the Balassa Index of Revealed Comparative Advantage (RCA), has been widely used to approximate specialization in different sectors. He used **Liesner's (1958)** idea of using relative export performance and proposed using the ratio of export shares as an index for comparative advantage. If *X* is exports of *i* specific country, *j* specific commodity and *w* the world or the referred group of countries, the Balassa Index is:

$$BI_{ij}=\frac{X_{ij}}{X_i}/\frac{X_{wj}}{X_w}=\frac{X_{ij}}{X_{wj}}/\frac{X_i}{X_w}$$

Where: $X_i=\sum_j X_{ij}$

$X_{wj}=\sum_i X_{ij}$

$X_w=\sum_i\sum_j X_{ij}$

A country *i* is said to have comparative advantage or disadvantage in commodity *j*, when the commodity *j's* export market size of country *i* in terms of its total national exports market size is greater or less than the commodity j's world exports market size in terms of the world total market size i.e. when $BI_{ij}$is greater or less than unity.

The Balassa Index of RCA has long been debated in the literature since it does not really match the original Ricardian Comparative Advantage. **Bowen (1983)** analyzed the theoretical basis of Balassa Index and its interpretations. He found, in particular, that the interpretation of Balassa Index, trade intensity above unity as a signal of Comparative advantage, relies on the assumption that a certain country exports every commodity, this assumption being unrealistic the traditional interpretation of Balassa Index is invalidated. Ricardian model is based on the intrinsic nature of the country that is to say that the country is more efficient in the production of a certain commodity. But Balassa RCA is based on the actual realization of the trade flows. Other grounds on which the Balassa Index has been criticized is the poor empirical characteristics as suggested by **Hinloopen and Van Marrewijk (2001) and De Benedictis and Tamberi (2004)**; it does not have a stable distribution over time which is a crucial property of the intrinsic nature of the Ricardian model and it provides poor ordinal ranking property **(Yeats 1985).**

Due to the inconsistency and alleged incomparability of Balassa Index, there have been a number of attempts to overcome these shortcomings.

Hoen and Ossterhaven (2006) suggested four properties which the ideal trade performance index preferably should have, which are basically bases on the shortcomings of the Balassa Index:

- A stable mean or median across time and space.
- Symmetry around the mean or median.
- Independence of classification.
- Stable distribution across time and space.

There are alternatives to BI called *Trade-cum-production Indices*. In theoretical sense, these indices would be more adequate and powerful measures in estimating comparative advantage, and thus there have been many trade-cum-production indices suggested. **Bowen (1983)** suggests an alternative index including production variables, clamming that the Balassa Index is partly a failure of the theoretical framework since the BI separates exports and imports when comparative advantage is properly a net trade concept. **Lafay (1992)** points out that the Balassa Index method eliminates the influence of macroeconomic variables, and that the reason why Balassa chose only export variables and excludes import variables can be applied in the same manner to import variables.

Lafay (1992) constructed the index for Comparative Advantage using the GDP of the country. Using Y_i to denote country *i's* GDP, and *M* imports, where $M_i = \sum_j M_{ij}$, Lafay Index (*LI*) is:

$$LI_{ij} = \left(1000\frac{X_{ij}-M_{ij}}{Y_i}\right) - \left(\frac{(X_{ij}+M_{ij})}{\sum_j (X_{ij}+M_{ij})} \cdot \frac{1000\sum_j (X_{ij}-M_{ij})}{Y_i}\right)$$

Expressing it in more condensed form:

$$LI_{ij} = \left(\frac{1000}{Y_i}\frac{2(X_{ij}M_i - X_i M_{ij})}{(X_i + M_i)}\right)$$

Country *i* is consider to have a comparative advantage or disadvantage in a given product when the balance relation to GDP exceeds or less than the attributed balance, i.e. LI_{ij} exceeds or less than zero. The comparative advantage neutral point is thus when thenet exports marks zero, i.e. $LI_{ij} = 0$.

The sum of a country's *LI* score is always zero, i.e.

$$\sum_j LI_{ij} = \left(\frac{1000}{Y_i}\frac{2(X_{ij}M_i - X_i M_{ij})}{(X_i + M_i)}\right) = 0$$

This means that the LI's distribution of a country has the invariant mean value over time, which puts more reliability on the over-time comparison of sectors within a country.

Trade-cum-production indices focused on how to better link themselves with theory. There is one more type of indices called export-only indices which are attempting to adjust BI to overcome its disadvantages, especially its asymmetric property, keeping at the same time its practical easiness and simplicity.

Vollrath (1991) suggested log transformation of the BI index as a solution to the asymmetry problem, i.e. $VI_{ij} = In(BI_{ij})$ but the problem with this is that the BI cannot be defined in case of zero exports i.e. when $BI_{ij} = 0$.

However, another symmetrical index without the zero export issue was provided by **Dalum et al. (1998)**, which is:

$$SI_{ij} = \frac{BI_{ij}-1}{BI_{ij}+1}$$

This is an approximation of a log transformation of the BI which ranges from -1 to +1 and is equal to 0 at the comparative advantage neutral point, where $BI_{ij} = 1$.

Proudman and Redding (1998) constructed an index called *Weighted Revealed Comparative Advantage Index (WI)* to fix the mean of BI by normalizing BI with its cross-section mean. Using *N* to denote the number of sectors,

$$WI_{ij} = \frac{BI_{ij}}{\frac{1}{N}\sum_{j=1}^{N} BI_{ij}}$$

The mean value of *WI* is constant and equal to one, which enables the overtime comparison within a country. It ranges from 0 to ∞.

Hoen and Oosterhaven (2006) constructed an additive form of BI which can be:

$$AI_{ij} = \frac{X_{ij}}{X_i} - \frac{X_{wj}}{X_w}$$

The value of AI ranges from -1 to +1, with the neutral point at zero. The main advantage of this index is that it is not affected by the level of sectoral aggregation:

$$\frac{1}{N}\sum_j AI_{ij} = \sum_j \left(\frac{X_{ij}}{X_i} - \frac{X_{wj}}{X_w}\right) = 0$$

$$\sum_{j=s} AI_{ij} = \sum_{j=s} \quad \sum_j \left(\frac{X_{ij}}{X_i} - \frac{X_{wj}}{X_w}\right) = \frac{X_{is}}{X_i} - \frac{X_{ws}}{X_w} = AI_{is}$$

While the AI has many advantages in cross-section analysis, the comparability in cross-country is in doubt because the sum of AI values with respect to a given sector is not stable, thus leads to variant mean value.

Some of the economist expressed Revealed Comparative Advantage using a *hypothetical state*: they used a deviation of the actual data from the value that would have been in the comparative advantage neutral point. **Bowen (1983)** constructed an RCA index as a deviation between the actual and expected values of trade, production and consumption. However, this index still has a problem of concordance between production data and trade data.

One of the recent studies which bring the hypothetical situation has been done by **Yu et al. (2009)**, which is called the Normalized Revealed Comparative Advantage (NI). The comparative advantage neutral point is passed on the concept of BI i.e. the exports at the neutral point, $\widehat{X_{ij}}$, is derived from $\left(\widehat{X_{ij}}/X_i\right)/(X_{wj}/X_w) = 1$.

They normalized by the total world exports the deviation of the actual exports with respect to the exports that would have been in the comparative advantage neutral point expressed as:

$$.\Delta X_{ij} = X_{ij} - \widehat{X_{ij}} = X_{ij} - \frac{X_i X_{wj}}{X_w}$$

$$NI_{ij} = \frac{\Delta X_{ij}}{X_w} = \left(\frac{X_{ij}}{X_w} - \frac{X_i X_{wj}}{X_w X_w}\right)$$

The range of Ni index is -0.25 to 0.25. Since it is normalized by the size of the world total exports, which is a very big number compared to a country's exports on a sector, the numeric values of NI is usually very small. **Yu et al. (2009)** recommended scaling them by 10,000. One of the biggest advantages of the NI is that the comparability across space and

time is well established that is to say the sum of NI is stable and equal to zero across space and time.

Although the different indices explained above somehow overcome the shortcomings of the BI, yet none of them can be called the perfect one. Each has its advantages and disadvantages, thus it should be important to well acknowledge the properties of the indices and properly use them.

Table 1: Summary of RCA Indices

Index	Formula
BI	$BI_{ij}=\frac{X_{ij}}{X_i}/\frac{X_{wj}}{X_w}=\frac{X_{ij}}{X_{wj}}/\frac{X_i}{X_w}$
LI	$LI_{ij}=\left(1000\frac{X_{ij}-M_{ij}}{Y_i}\right)-\left(\frac{(X_{ij}+M_{ij})}{\sum_j(X_{ij}+M_{ij})}\frac{1000\sum_j(X_{ij}-M_{ij})}{Y_i}\right)$
SI	$SI_{ij}=\frac{BI_{ij}-1}{BI_{ij}+1}$
WI	$WI_{ij}=\frac{BI_{ij}}{\frac{1}{N}\sum_{j=1}^{N}BI_{ij}}$
AI	$AI_{ij}=\frac{X_{ij}}{X_i}-\frac{X_{wj}}{X_w}$
NI	$NI_{ij}=\frac{\Delta X_{ij}}{X_w}=(\frac{X_{ij}}{X_w}-\frac{X_iX_{wj}}{X_wX_w})$

We can also summarize the statistical properties of all the indices in a table to see just at a glance which index has more favorable features for a better Revealed comparative Advantage Index.

Table 2: Statistical Properties of the Indices

	BI	LI	SI	WI	AI	NI
Comparative advantage Neutral point	1	0	0	1	0	0
Sum over sectors	-	0	-	-	0	0
Sum over Countries	-	-	-	-	-	0
Independent from aggregation Level	X	X	X	X	✓	✓
Independent from reference group of countries	X	X	X	X	X	✓
Symmetry	X	✓	✓	X	✓	✓
normality	X	X	X	X	X	X

DATA AND METHODOLOGY

To study the Comparative Advantage, I have chosen two developing countries of Asia: India and China. I have chosen these countries because these two countries are not only similar in size and population, but they are also the most attractive countries in Asia to the world. They are also the two largest developing economies in Asia, which had splendid civilization in the past but fell behind the world powerful economic countries since the middle of the 19th century for some reasons, but now start to catch up again.

Data Chosen

In this paper, I have used Balassa's Index of Revealed Comparative Advantage. But I have taken it differently. Instead of taking export data of India and China, I have taken US's import data. Since the US is one of the most important economic entities in the world, and it is one of India's and China's main trade partners, the import data of the US is a representative item and can well explain the problem which we are concerned.

The data has been collected from the *OCED Bilateral Trade Database and OECD Stan Database* (http://stats.oecd.org/Index.aspx?DataSetCode=STAN).

I have chosen 11 typical sectors which reflect all the industries of India and China. Furthermore, I have taken the category of High, Medium and Low Technology Industries to see the difference between Comparative Advantage clearly. The sectors chosen are:

- Agriculture, Hunting, Forestry and Fishing
- Mining and Quarrying
- Food Products, Beverages and Tobacco
- Textiles, Textile Products, Leather and Footwear
- Wood and Products of Wood and Cork
- Pulp, Paper, Paper Products, Printing and Publishing
- Chemical, Rubber, Plastics and Fuel Products
- Non-Metallic Mineral Products
- Basic Metals
- Fabricated Metal Products
- Machinery and Equipment
- High technology industries
- Medium-High Technology Industries
- Medium-Low technology Industries
- Low-Technology Industries

I have covered the period from 1990 to 2011 which are 22 years.

Formula Chosen

I have calculated the Revealed Comparative Advantage (RCA) index of India and China using the following formula:

$$\text{For India:} \qquad m_{iit} = {(M_{iit}/M_{i.t})}\Big/{(M_{.it}/M_{..t})}$$

$$\text{For China:} \qquad m_{ict} - {(M_{ict}/M_{i.t})}\Big/{(M_{.ct}/M_{.t})}$$

Where

- m_{iit}= India's Sector *i*'s RCA

- M_{iit}= US imports in sector *i* from India in year *t*
- $M_{.it}$= US total imports from India
- m_{ict}= China's sector *i*'s RCA
- M_{ict} = US imports in sector *i* from China in year *t*
- $M_{i.t}$= US total imports in sector *i* in year *t*
- $M_{.ct}$= US total imports from China in year *t*
- $M_{..t}$= US total imports in year *t*

RESULTS

From the data, I have calculated the RCA of India and China as shown in the following sections.

Table 3: Dynamic RCA of India for Different Sectors

Yr/Sctr	1	2	3	4	5	6	7	8	9	10	11
1990	2.52	0.06	1.10	3.64	0.20	0.06	1.16	0.53	0.44	2.08	0.10
1991	2.32	0.06	1.25	3.85	0.21	0.06	0.98	0.67	0.43	2.16	0.10
1992	2.39	0.04	1.02	4.08	0.19	0.07	0.92	0.74	0.54	2.19	0.11
1993	2.52	0.05	1.27	4.10	0.19	0.09	0.66	0.73	0.65	2.27	0.12
1994	2.79	0.04	1.56	4.23	0.19	0.12	0.74	0.72	0.64	2.36	0.14
1995	2.39	0.08	1.52	4.24	0.23	0.13	0.73	0.91	0.58	2.44	0.17
1996	2.55	0.06	1.62	4.23	0.20	0.14	0.75	0.86	0.55	2.34	0.18
1997	2.52	0.04	1.61	3.92	0.19	0.34	0.73	0.97	0.62	2.40	0.23
1998	2.47	0.07	1.70	3.73	0.19	0.17	0.69	1.02	0.78	2.40	0.19
1999	3.47	0.03	1.66	3.84	0.18	0.12	0.61	1.09	0.76	2.38	0.18
2000	3.17	0.03	1.84	4.05	0.21	0.16	0.65	1.34	1.28	2.33	0.17
2001	2.69	0.04	1.77	3.97	0.23	0.21	0.92	1.46	0.64	2.21	0.23
2002	2.04	0.02	1.65	3.63	0.19	0.22	0.85	1.48	1.29	1.88	0.22
2003	1.83	0.06	1.60	3.61	0.20	0.23	0.93	1.67	0.94	1.80	0.26
2004	2.02	0.03	1.49	3.69	0.17	0.19	0.83	1.88	1.53	1.90	0.28
2005	1.76	0.03	1.33	4.01	0.15	0.21	0.94	1.96	1.16	1.76	0.33
2006	1.54	0.02	1.18	3.95	0.19	0.21	0.88	1.96	1.22	1.70	0.40
2007	1.44	0.01	1.07	3.69	0.23	0.38	1.13	1.94	1.26	1.64	0.40
2008	1.63	0.02	1.22	3.79	0.34	0.38	1.13	2.03	1.91	1.71	0.47
2009	1.28	0.01	1.02	3.54	0.28	0.38	1.32	1.63	1.46	1.48	0.40
2010	1.15	0.01	1.17	3.11	0.28	0.36	1.70	1.49	1.11	1.34	0.37
2011	1.32	0.01	1.68	2.98	0.29	0.43	1.74	1.43	0.90	1.35	0.36

An Analysis for India

By using the formula above, I have calculated the following Dynamic Revealed Comparative Advantage (RCA) Indices of India through time:

From ***Table 3***, we can clearly see that for sector 1 (Agriculture, Hunting, Forestry and Fishing), 3 (Food Products,

Beverages and Tobacco), 4 (Textiles, Textile Products, Leather and Footwear) and 10 (Fabricated Metal Products), the RCA Index is greater than one. That means India clearly holds comparative advantage in these sectors in the world market.

The RCA Index of India in Agriculture, Hunting, Forestry and Fishing (Sector 1), in which India has clear comparative advantage, increased from 1990 to 1999. From 2000 till today, it is continuously falling. For sector 3 which is Food Products, Beverages and Tobacco, RCA Index does not have any specific trend but have comparative advantage in the world market. Same is the case with Textiles, Textile Products, Leather and Footwear (Sector 4) and Fabricated Metal Products (Sector 10).

India was having Comparative Advantage in chemical, Rubber, Plastics and Fuel Products (Sector 7) in year 1990 but after that till 2006, its RCA Index was below unity. Then, again in the year 2007 till today, India's RCA Index in this sector become greater than unity i.e. India is holding Comparative Advantage in this sector. *Now India's chemical industry become one of the top 10 chemical industries and its chemical products output is the 12th in the world.*

What caused India's chemical industry developed so rapidly? The answer might be: because of the economic growth of all over the world in this period. Furthermore, the appropriate economic policy of the Indian government and the right market position and actively promote investment in this industry are also favorable factors for its flourishing development.

Till 1997, India was not having Comparative Advantage in Non-Metallic Products (Sector 8). Since India is a developing economy, it started holding Comparative Advantage in this sector also starting from 1998.

The case of Sector 9 (Basic Metals) for India is quite fluctuating. India was not having Comparative Advantage in Basic Metals till 1999 at all. In the year 2000, India was having Comparative Advantage. 2001 and 2003 were the years of Comparative Disadvantage for India. Then again, from 2004 to 2010, India was the holder of Comparative Advantage in this sector. Year 2011 was again the year of Comparative Disadvantage.

For the Sectors 2 (Mining and Querying), 5 (Wood and Products of Wood and Cork), 6 (Pulp, Paper, Paper Products, Printing and Publishing) and 11(Machinery and Equipment), India was never having comparative advantage.

From the 1960s to the early 1990s, India's largest exports were handicrafts, garments, engineering machinery, cotton yarn and leather products, tea and other items. This showed Indian's exports of Industrial Products were with relatively low technological content. From the table we can see that, the textile industry of India was holding a great comparative advantage since 1990. The RCA Index was always greater than one. India's textile industry is largest industry. Its industrial scale, total installed capacity and absolute number of employment are second only to China in the world.

Table 4: Dynamic RCA of Indian Industries

Year/Sector	High Technology Industries	Medium-High Technology Industries	Medium-Low Technology Industries	Low-Technology Industries
1990	0.04	0.17	1.17	3.07
1991	0.05	0.21	1.02	3.23
1992	0.06	0.21	1.05	3.20
1993	0.08	0.20	0.92	3.39
1994	0.09	0.21	0.99	3.42
1995	0.11	0.25	1.00	3.45
1996	0.14	0.27	0.92	3.41

1997	0.18	0.31	0.92	3.26

Table 4 – Cond.,

1998	0.11	0.31	1.00	3.21
1999	0.09	0.29	0.96	3.40
2000	0.08	0.32	1.14	3.55
2001	0.15	0.37	1.07	3.26
2002	0.18	0.34	1.20	3.19
2003	0.23	0.41	1.06	3.16
2004	0.19	0.45	1.21	3.13
2005	0.21	0.52	1.17	3.19
2006	0.26	0.61	1.04	3.21
2007	0.32	0.64	1.16	3.07
2008	0.52	0.74	1.14	3.03
2009	0.54	0.71	1.03	2.81
2010	0.57	0.63	1.34	2.81
2011	0.60	0.64	1.27	2.92

In field of clothing, India's advantage lies in enhancing the value added to garment while China's strength is the mass production. India, China and Pakistan are all dominant countries which are skilled in producing cotton yarn and cloth. Since their similarity in this field, the Asian countries should conduct multilateral cooperation in order to improve the world textile and clothing market share.

Manufacturing is playing an important role in the Indian economy. The electronic products manufacturing industry is an important part of the plan of India's economic development and so do the car industry, it, metal products industry and so on. There are many world famous companies like Infosys, Tata, which are operating in these fields.

Table 4 is showing the Dynamic Revealed Comparative Advantage of Indian High Technology, Medium-High Technology Medium-Low Technology and Low Technology Industries. One can clearly conclude from this table that India has a very clear Comparative Advantage only in Low Technology Industries. India has Comparative Advantage in Medium-Low Technology Industries in all the years from 1990 to 2011 except 1993,1994,1996,1997 and 1999.

In High technology Industries and Medium-High Technology Industries, India has a clear Comparative Disadvantage, which means India imports heavily in these industries.

An Analysis for China

From Table 5, we can observe that, China has Comparative Advantage in Sector 4 (Textiles, Textile Products, Leather and Footwear), 8 (Non-Metallic Minerals) and 10 (Fabricated Metal Products) since the RCA Index is greater than unity, which means China holds Comparative Advantage in these sectors in the world market.

For Sector 5 which is Wood and Products of Wood and Cork, the RCA Indices in the year 1990 was greater than unity (1.04). But after that, its RCA Index was getting smaller and smaller and reached its lowest point in year 1997 (RCA=0.57). After 1998, RCA Index began to rise but still small than unity.

The Machinery and Equipment sector (Sector 11) of China has an opposite situation. In the year 1990, the RCA Index was quite small (RCA=0.71), but it grew year by year. In the year 1997, the RCA Index became a little larger than unity (RAC=1.01), which means that China from 1997 onwards, China is holding Comparative advantage in Machinery and Equipment. In the year 2011, its RCA was 1.83.

China is the world's largest producer and exporter of Textile Products. The textile industry is also the largest labor

intensive industry which creates job opportunities and has the most labor force of the traditional manufacturing in China. Besides, this industry has indirect employment of nearly 120 million. Chinese textile industry's international competitiveness is mainly performed in terms of cost, size and quality, cheap labor resources, investment grow steadily and strong domestic and international demand.

Table 5: Dynamic RCA of China for Different Sectors

Yr/Sectr	1	2	3	4	5	6	7	8	9	10	11
1990	0.30	0.51	0.91	4.76	1.04	0.17	0.52	1.05	0.24	1.47	0.71
1991	0.28	0.39	0.63	4.63	0.92	0.19	0.56	1.13	0.20	1.44	0.73
1992	0.25	0.26	0.64	4.27	0.83	0.22	0.61	1.27	0.15	1.51	0.72
1993	0.30	0.13	0.48	4.33	0.69	0.27	0.65	1.37	0.13	1.47	0.78
1994	0.23	0.17	0.40	4.03	0.64	0.32	0.68	1.46	0.15	1.49	0.87
1995	0.18	0.16	0.44	3.63	0.70	0.28	0.71	1.69	0.22	1.57	0.92
1996	0.19	0.15	0.40	3.46	0.59	0.32	0.63	1.69	0.21	1.55	0.98
1997	0.17	0.16	0.38	3.21	0.57	0.34	0.60	1.69	0.21	1.57	1.01
1998	0.17	0.11	0.35	2.80	0.64	0.40	0.60	1.73	0.24	1.62	1.07
1999	0.19	0.05	0.36	2.74	0.66	0.47	0.61	1.76	0.27	1.88	1.17
2000	0.17	0.08	0.40	2.68	0.80	0.55	0.55	1.92	0.28	2.03	1.23
2001	0.16	0.04	0.39	2.59	0.83	0.58	0.54	1.98	0.24	2.12	1.32
2002	0.15	0.04	0.38	2.32	0.80	0.61	0.51	1.76	0.19	2.00	1.40
2003	0.16	0.02	0.40	2.23	0.80	0.67	0.46	1.62	0.19	1.98	1.51
2004	0.16	0.02	0.38	2.19	0.72	0.69	0.48	1.45	0.30	1.93	1.62
2005	0.15	0.03	0.38	2.42	0.79	0.74	0.45	1.44	0.37	1.92	1.67
2006	0.15	0.02	0.41	2.47	0.95	0.79	0.45	1.54	0.45	1.99	1.70
2007	0.14	0.01	0.42	2.52	1.12	0.86	0.44	1.53	0.47	1.94	1.69
2008	0.14	0.02	0.45	2.67	1.38	0.91	0.50	1.67	0.60	2.10	1.76
2009	0.12	0.01	0.37	2.45	1.33	0.88	0.44	1.51	0.38	1.85	1.65
2010	0.12	0.01	0.38	2.54	1.37	0.87	0.44	1.61	0.25	1.88	1.73
2011	0.11	0.01	0.39	2.60	1.49	0.92	0.47	1.75	0.25	1.98	1.83

We can see from the Table 5 that the RCA Index of the textile industry is relatively large compared to the other sector's RCA Index. Although, the Index is becoming smaller recently, but it is obvious that China is still holding Comparative Advantage in this sector because the RCA Index is still greater than one. The present trade status of the Chinese textile products gives powerful proof of this point.

Besides Textiles, China has Comparative Advantage in the field of Non-Metallic Mineral Products (Sector 8) and Fabricated Metal Products (Sector 10). Since China is a vast country with an abundance of metallic and non-metallic minerals. The RCA Index of these two sectors did not change much since 1990.

China had a Comparative Advantage in Wood and Products of Wood and Cork (Sector 5) in the earlier years till 1990 i.e. to say that China used to export Wood and Wood Products. But from 1991, accompanied by the rapid development of construction activities, China's market demand of Wood increased year by year, so China restored to import heavily in this sector. Since 2005, China had become second only to the US, the world's largest importer of timber.

Table 6: Dynamic RCA of Chinese Industries

Year/Sector	High Technology Industries	Medium-High Technology Industries	Medium-Low Technology Industries	Low-Technology Industries
1990	0.59	0.35	0.61	3.07

1991	0.60	0.37	0.64	3.01
1992	0.56	0.40	0.73	2.90
1993	0.62	0.43	0.76	2.85
1994	0.76	0.43	0.80	2.76
1995	0.82	0.47	0.90	2.61
1996	0.84	0.49	0.84	2.55
1997	0.87	0.49	0.85	2.47
1998	0.93	0.50	0.89	2.29
1999	0.98	0.53	1.02	2.29
2000	1.04	0.59	0.99	2.32
2001	1.08	0.57	1.03	2.26
2002	1.18	0.54	1.01	2.06
2003	1.33	0.55	0.95	2.00
2004	1.52	0.58	0.86	1.89
2005	1.62	0.59	0.81	1.96
2006	1.64	0.62	0.82	1.96
2007	1.56	0.68	0.82	2.01
2008	1.62	0.76	0.87	2.11
2009	1.44	0.74	0.80	1.90
2010	1.55	0.75	0.73	1.92
2011	1.69	0.79	0.71	1.91

Table 6 clearly shows that China has large Comparative Advantage in Low Technology Industries. The RCA Index has fallen over the years but still it is above unity. It has clear Comparative Disadvantage in Medium-High Technology Industries.

China was an importer of High Technology Industry Products since 1990 to 1999. In 2000, the RCA Index of High Technology Industry became a slight greater than unity (RCA=1.04). Since then the RCA Index has been increasing continuously, which means China is becoming developed in High Technology Industry. It has started exporting High Technology products. This is because Chinese technology is developing so rapidly. After 30 years of great efforts, China has built up its own national industries and continues to grow and develop.

CONCLUSIONS

The Balassa's Revealed Comparative Advantage (RCA) Indices is widely used in the field of International Trade. For the calculation of RCA Indices of India and China, this Index was the foundation.

I calculated the Revealed Comparative Advantage (RCA) Index of India and China using US imports data which was collected from OECD online Database. From the calculated Indices, I found that both India's and China's RCA Index of Textiles, Textile Products, Leather and Footwear (Sector 4) and Fabricated Metal Products (Sector 10) were greater than unity in the years from 1990 to 2011. This means that both India and China has Comparative Advantage in these two fields.

Textile Industry is the traditional industry of India and China because of the facts that the two countries have very large labor force and this industry's character of relatively low schooling requirements.

Since India and China, in the recent years, has very high growth rates and are developing so rapidly, which is the reason of both India's and China's rapid accumulation of physical capital. Because of the availability of physical capital, the textile sector, metal products and manufacturing industries of both the countries shows an improvement in RCA Indices.

Aw we know the development tendencies of India and China and considering their economic aggregates and the growth rates, we can conclude that both the countries are playing and will play a more and more important role in the fields of economy and International Trade in the future not only in Asia but also in the whole world. India's and China's industrial diversification has been attracting foreign investments which will give capital intensive industries of both the countries a good chance to develop.

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